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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,023	01/16/2004	Tomochika Murakami	00862.023401	6269

5514 7590 03/05/2008
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EXAMINER

ABDI, AMARA

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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03/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/758,023	MURAKAMI ET AL.
Examiner	Art Unit	
AMARA ABDI	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 December 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2,4-6,13 and 17-19 is/are pending in the application.
 - 4a) Of the above claim(s) 3, 7-12, 14-16, 20 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,2,4-6,13 and 17-19 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 January 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. Applicant's response to the last office action, filed December 18, 2007 has been entered and made of record.

Remarks:

2. Applicant's arguments with respect to claims 1-2, 46, 13, and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

a. Applicant's argues that the check-bit is merely used for checking an error, not used for detecting a position in an image where tampering has occurred and correcting an error at the detected position.

However, in response to applicant's arguments, First Iwamura clearly shows the detecting of a position in an image where tampering has occurred (see paragraph [0001], line 3-4). Second, the Examiner would like to point out that the specification is not measure of the invention. Therefore, limitations contains therein can not be read into the claims for purpose of avoiding the prior art. *Ir re Sporck*, 55CCPA 743, 386 F. 2d 924, 155 USPQ 687 (1968). In the instant case, "the correcting of an error at the detected position was not claimed".

Therefore, claim 1 still not in condition of allowance.

b. Applicant's argues that the cited reference to Yamagishi fails to teach or suggest an arrangement of generating a binary image of a first region in an original image.

However, in response to applicant's arguments, the Examiner would like to point out that "a binary image" is a new limitation added to claim 1 as an amendment. However, as discussed above, Iwamura teaches detecting of a position in an image where tampering has occurred. To link the Iwamura reference for an understandable rational, the Examiner is introducing the prior art reference Murakami (US-PGPUB 2003/0123698). Murakami teaches the generating of a binary image (Step 145 in Fig. 14, paragraph [0117], line 1-5).

"All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective function, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention". (Adapted from *Anderson's Black Rock Inc. v. Pavement Salvage Co*)

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Iwamura using Murakami by including the binary image generating means for generating a binary image to the Iwamura's data processing apparatus in order to provide an image processing, which can accurately extract an embedded digital watermark even after the conversion/ edit process such as rotation or the like of an image (paragraph [0011], line 6-9).

Therefore, claim 1 still not in condition of allowance.

Specification

3. The specification is objected to because it does not contain the limitation "as the additional information" that was added into claims 4 and 5 as amendment.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 4 and 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The added limitation in both claims 4 and 5 "as the additional information" does not have any support from the specification, therefore, it is considered as a new matter.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 4-6, 13, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamura (US-PGPUB 2003/0012406) in view of Pelly et al. (US-PGPUB 2003/0009674) and Makurami (US-PGPUB 2003/0123698).

(1) Regarding claims 1 and 13:

Iwamura discloses an image processing method and apparatus (paragraph [0001], line 2-3) for generating information (paragraph [0071], line 2-3) that allows detecting a position of tampering for an original image (paragraph [0001], line 3-4, and paragraph [0118], line 4-6), comprising:

watermark information generating means (process 104 in Fig. 1) for generating watermark information which contains the binary image and additional information (paragraph [0078], line 1-9), (the binary image and additional information is read as an information associated with the image); and

output means (302 in Fig. 3) for outputting, as an output image, an image formed by replacing image information of the second region in the original image with the watermark information (paragraph [0111], line 1-3), (the embedding bits in B component of the original image is read as the same concept as replacing of the information of the second region with a watermark information).

Iwamura, does not explicitly mention the following limitation:

1) the original image is formed of first and second regions, error-correction encoding means for generating error-correction encoded watermark information by making error-correction encoding of the watermark information, and reconstructing means for reconstructing the error-correction encoded watermark information by varying

an arrangement order of each bit which forms the error-correction encoded watermark information; and

- 2) a binary image generating means for generating a binary image.

(A) Concerning item 1):

Pelly et al., in analogous environment, teaches a method and apparatus for detecting data, where the original image is formed of first and second regions (paragraph [0012], line 10-15), error-correction encoding means for generating error-correction encoded watermark information by making error-correction encoding of the watermark information (paragraph [0017], line 4-8), and reconstructing means for reconstructing the error-correction encoded watermark information by varying an arrangement order of each bit which forms the error-correction encoded watermark information (paragraph [0018], line 3-7).

It would have obvious to one having ordinary skill in the art at the time the invention was made to use the system of Pelly et al., where generating an error correction, in the system of Iwamura in order to provide an improvement in copyright protection. The copyright protection is generally performed at a highest level to the watermarking system, so that by providing an Additional copyright protection layer on top of an existing watermarking layer, copyright protection of material can be facilitated (paragraph [0011], line 6-11).

(B) Concerning item 2):

Murakami, in analogous environment, teaches an image processing apparatus and method, where generating a binary image (Step 145 in Fig. 14, paragraph [0117], line 1-5).

It would have obvious to one having ordinary skill in the art at the time the invention was made to use the system of Murakami, where generating a binary image, in the system of Iwamura in order to provide an image processing, which can accurately extract an embedded digital watermark even after the conversion/ edit process such as rotation or the like of an image (paragraph [0011], line 6-9).

(The following limitation: "the first region using an image of the first region" was disclosed by Pelly et al., (paragraph [0012], line 10-15), where the original image has three regions, the first region, second region, and a third region)

(2) Regarding claim 2:

Iwamura further discloses an apparatus (paragraph [0071], line 2-3), further comprising:

encryption means (process 201 in Fig. 2) for encrypting the watermark information generated by said watermark information generation means (paragraph [0086], and paragraph [0087], line 1-3), and

wherein said error-correction encoding means makes error-correction encoding of the watermark information encrypted by said encryption means (paragraph [0127], line 4-6; and paragraph [0128], line 1-3), (the generating of check bits for the encrypted

blocks is read as the same concept as the error-correction encoding of the watermark information).

(3) Regarding claim 4:

Iwamura further discloses an apparatus (paragraph [0071], line 2-3), further comprising:

Hash value calculation means (Fig. 6) for calculating a Hash value using the image of the first region (paragraph [0139], line 1-3), (the hash value is read as an output value of the hash function), and

wherein said watermark information generation means further stores data of the Hash value in the watermark information (paragraph [0101], line 5-9), (the storing of the various data by the ROM is read as the same concept as the storing of the data of the hash value by the watermark information generating means).

The limitation: “as the additional information” has not given a weight in the claim, since it is considered as a new matter (see the rejection under 35 U.S.C. 112).

(4) Regarding claim 5:

Iwamura discloses all the subject matter as described in claim 1 above.

Furthermore, Iwamura discloses a bit sequence (paragraph [0222], line 5-6).

Iwamura does not explicitly mention the decoding of the watermark information.

Pelly et al., in analogous environment, teaches a method and apparatus for detecting data, where decoding of the watermark information (140 in Fig. 4, paragraph [0037], line 3-7).

It would have obvious to one having ordinary skill in the art at the time the invention was made to use the system of Pelly et al., where decoding the watermark information, in the system of Iwamura in order to provide an improvement in copyright protection. The copyright protection is generally performed at a highest level to the watermarking system, so that by providing an Additional copyright protection layer on top of an existing watermarking layer, copyright protection of material can be facilitated (paragraph [0011], line 6-11).

(5) Regarding claim 6:

Iwamura further discloses an apparatus (paragraph [0071], line 2-3) where the bit sequence is a Hash value for a part of the watermark information that contains at least the feature image (paragraph [0139], line 1-8).

(6) Regarding claim 17:

Iwamura further discloses a program for making a computer function as an image processing apparatus of claim 1 (paragraph [0469], line 4-10).

(7) Regarding claim 18:

Iwamura further discloses a program for making a computer implement an image processing method of claim 13 (paragraph [0469], line 4-10).

(8) Regarding claim 19:

Iwamura further discloses a computer readable storage medium storing a program of claim 17 (paragraph [0470], line 1-6).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMARA ABDI whose telephone number is (571)270-1670. The examiner can normally be reached on Monday through Friday 7:30 Am to 5:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wu Jingge can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amara Abdi/
Examiner, Art Unit 2624

JINGGE WU
SUPERVISORY PATENT EXAMINER